

MONODISPERSE CORE/SHELL AND OTHER COMPLEX STRUCTURED  
NANOCRYSTALS AND METHODS OF PREPARING THE SAME

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ABSTRACT

The present invention provides new compositions containing naearly  
monodisperse colloidal core/shell semiconductor nanocrystals with high  
photoluminescence quantum yields (PL QY), as well as other complex structured  
semiconductor nanocrystals. This invention also provides new synthetic methods  
10 for preparing these nanocrystals, and new devices comprising these compositions.  
In addition to core/shell semiconductor nanocrystals, this patent application also  
provides complex semiconductor nanostructures, quantum shells, quantum wells,  
doped nanocrystals, and other multiple-shelled semiconductor nanocrystals.

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